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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2019/2020

**TFF2231 – FUNDAMENTALS OF FINANCE**  
(All sections/Groups)

13 MARCH 2020  
9.00 AM – 11.00 AM  
(2 Hours)

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### INSTRUCTIONS TO STUDENT

1. This question paper consists of 5 pages excluding cover page.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**Instruction: Answer all FOUR (4) questions.**

**QUESTION 1**

A. The time value of money (TVM) is the concept that money available at the present time is worth more than the identical sum in the future due to its potential earning capacity. Calculate the required TVM of these independent scenarios.

- i. Siti deposits RM100 in the savings account at Affin Bank with an interest rate of 5% per year for 5 years. How much would Siti have in the savings account at the end of the 5-year period? (2 marks)
- ii. Assume that Ah Seng deposits RM5,000 in year 1 and RM 8,000 in year 2 in the savings account at CIMB at the interest rate of 10% per year. How much would Ah Seng have in the savings account at the end of the fifth year? (3 marks)
- iii. You have just won a puzzle contest where you were offered two choice of prizes that is whether to accept RM60,000 today or RM12,000 at the end of each year for 5 consecutive years. If the cash flow is discounted at a yearly rate of 12% and compounded twice a year, which prize would you choose? (8 marks)

B. Indah Air Berhad issued bonds that will mature in a period of 10 years. These bonds pay interest twice a year at a rate of 8% and the par value of the bond is RM1,000. If the yearly required rate of return (YTM) each year by investors is 6%, solve the following questions.

- i. What is the present market value of the bond? (6 marks)
- ii. Is the bond issued at premium or discount? (2 marks)
- iii. How much can Indah Air Berhad raise in capital if they issue 10,000 units of the bond? (2 marks)
- iv. If Indah Air Berhad would like to issue each bond at par value, what will be the yearly required return (YTM)? (2 marks)

**(Total: 25 marks)**

**Continued...**

**QUESTION 2**

A. Capital budgeting refers to the technique used for analysing whether an investment in an asset or long-term project is profitable or not. These techniques are often mentioned as the criteria of capital budgeting.

- i. What are **FOUR (4)** basic techniques in capital budgeting. (4 marks)
- ii. You are considering the following two projects; Project A and Project B. Based on the payback period technique, should these projects be accepted if the targeted payback period is 3 years?

Project A	Project B
Requires an initial investment of RM250,000 and this project will generate cash inflow of RM100,000 at the end of the second and third year and RM150,000 at the end of the fourth year.	Requires an initial investment of RM400,000 and this project will produce cash inflow of RM125,000 every year for five years.

(8 marks)

B. The opening of a mini market involves a cost of RM 300,000 as the initial capital. It is expected that the mini market will generate a cash flow of RM 20,000 every year for a period of five years. At the end of the fifth year, the mini market can be sold to generate a cash flow of RM 400,000. The cost of capital is equivalent to 10%

- i. What is the Net Present Value (NPV) of the project? (6 marks)
- ii. What is the profitability index (PI) of the project? (4 marks)
- iii. Should the company proceed with the idea of opening the mini market? Justify. (3 marks)

(Total: 25 marks)

Continued...

**QUESTION 3**

- A. You are considering to purchase Strange Company stock. You anticipate that the company will pay dividends of RM 3.50 per share next year and RM 4.00 per share the following year. You believe that you can sell the stock for RM 20.00 per share two years from now. If your required rate of return is 10 percent, what is the maximum price that you would pay for a share of Strange Company stock?

(6 marks)

- B. Excellent Construction Company is evaluating 2 options for the optimal capital structure based on the information below:

Capital Resource	Weight (%) Plan A	Weight (%) Plan B
Long-term debt (Bond)	35 %	50 %
Preference shares	15 %	20 %
Ordinary shares	50 %	30 %

*Long-term debt:* The company can issue bonds that have a maturity period of 20 years with a face value of RM1,000. The coupon rate for the bonds is 9% and is sold at the price of RM980. The YTM on the bond is 9.37% and corporate tax rate is 40%.

*Preference Shares:* The company found that it can issue preference shares at the price of RM6.50 per share with the annual dividend payment of RM0.80.

*Ordinary Shares:* The ordinary shares of the company are sold at the present price of RM4 per share. The dividend that is expected to be paid at the end of next year is RM0.50. The growth rate of dividends is constant, that is at 8% every year.

- Calculate the cost for each of the capital resources. (9 marks)
- Calculate the weighted average cost of capital (WACC) for Plan A and Plan B. (8 marks)
- Which capital structure should the company choose and why? (2 marks)

(Total: 25 marks)

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**QUESTION 4**

A. The year ended 2018 financial information for Dutch Baby (Malaysia) Berhad is extracted as follow:

Items	Amount (RM)
Sales	9,900,000
Cost of Goods Sold	6,500,000
Inventories	660,000
Account Receivables	567,000
Account Payables	243,000
Total Current Assets	35,000,000
Total Current Liabilities	18,200,000

- i. What is the net working capital? (2 marks)
- ii. Assuming all sales are on credit, what is the operating cycle? (6 marks)
- iii. What is the cash cycle? (2 marks)
- iv. If the company is having a credit term of 3/10, net/60 and the Account Receivable stated above is the outstanding amount. How much is the total discount given if the customers pay within the discount period? (2 marks)

B. Sweet Floral Fabric Company is planning on how many fabric dining sets to order next year. The company expects that they will sell approximately 500 sets next year at a price of RM 250 per set. The wholesale price that the company pays per set is RM 120. The carrying cost per set is estimated at RM 20 and the fixed order cost is RM 80 per order.

- i. What is the economic order quantity (EOQ) for the fabric dining sets? (4 marks)
- ii. How many times per year that the company needs to order to meet the expected sales? (2 marks)
- iii. What is the total inventory cost? (4 marks)
- iv. List **THREE (3)** reasons why it is crucial for a company to have a good inventory management (3 marks)

(Total: 25 marks)

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## APPENDIX

### Future Value:

$$FV = PV(1 + r)^t$$

### Annuities

$$PV = PMT \left[ \frac{1 - \frac{1}{(1+r)^t}}{r} \right]$$

$$FV = PMT \left[ \frac{(1+r)^t - 1}{r} \right]$$

**Perpetuity:**  $PV = PMT / r$

### EAR & APR

$$EAR = \left[ 1 + \frac{APR}{m} \right]^m - 1$$

$$APR = m \left[ (1 + EAR)^{1/m} - 1 \right]$$

### Bond Pricing

$$\text{Bond Value} = C \left[ \frac{1 - \frac{1}{(1+YTM)^t}}{YTM} \right] + \frac{F}{(1+YTM)^t}$$

### Stock Value

$$\hat{P}_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+R)^t}$$

### Estimating Dividends

Zero growth:  $P_0 = D / R$

Constant Growth Stock:  $D_t = D_0(1+g)^t$

Dividend Growth Model:

$$\hat{P}_0 = \frac{D_0(1+g)}{R-g} = \frac{D_1}{R-g}$$

Nonconstant + Constant growth

$$\hat{P}_0 = \frac{D_1}{(1+R)^1} + \frac{D_2}{(1+R)^2} + \frac{D_3}{(1+R)^3} + \dots + \frac{D_{\infty}}{(1+R)^{\infty}}$$

### Net Present Value

$$NPV = \sum_{t=0}^n \frac{CF_t}{(1+R)^t} - CF_0$$

### Cost of equity

$$R_E = R_f + \beta_E (E(R_M) - R_f)$$

### WACC

$$= E/V \times R_E + P/V \times R_P + D/V \times R_D(1 - T_c)$$

### Operating cycle

= inventory period + accounts receivable period

### Cash Cycle

= Operating Cycle - Accounts payable period

### EOQ Model

$$Q^* = \sqrt{\frac{2TF}{CC}}$$

End of Paper